sequence and PDX modeling. CONCLUSION: We propose a trial using clinical microdialysis, placed in diffuse midline glioma tissue post biopsy, as an experimental research tool, to assess CNS drug entry and targeted inhibition with a first-in-kind agent, guided on the dynamic nature of CNS drug delivery with the overall intent to inform future clinical therapies.

**CLRM-06**

**PROSPECTIVE CLINICAL STUDY OF CONVENTIONALLY FRACTIONATED CONCURRENT CHEMORADIOTHERAPY AND HYPOFRACTIONATED CONCURRENT CHEMORADIOTHERAPY AFTER THE SURGERY OF HIGH-GRADE GLIOMAS**

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PURPOSE: To observe and evaluate the efficacy and safety of conventional fractionated concurrent chemoradiotherapy and hypofractionated concurrent chemoradiotherapy within 1 month after surgery, and received concurrent temozolomide 75 mg/m2 during radiotherapy until the end of radiotherapy. Sequential temozolomide chemotherapy at 200 mg/m2 for at least 6 cycles. All patients were randomly divided into groups, one group was given conventional fractional irradiation, 60Gy/30f in high-risk areas, 46Gy/23f in low-risk areas, and the other group was given low-fractionated irradiation, 36Gy/15f in high-risk areas, and 33Gy/15f in low-risk areas 43Gy/15f. The overall survival (OS), progression-free survival (PFS), induction of cerebral edema and radiation-induced brain necrosis were evaluated. RESULTS: As of December 31, 2022, a total of 60 patients were enrolled, including 30 in the conventional fractionation treatment group and 30 in the hypofractionated treatment group. At present, 58 patients survived and 2 died, 2 in the conventional fractionation group, one due to tumor recurrence and one due to cardiac accident; 7 patients recurred, including 4 in the conventional fractionation group and 3 in the low fractionation group. Radiation cerebral edema occurred in 9 cases, 6 cases in the hypofractionated group and 3 cases in the conventional fractionation group, all of which were completely relieved after dehydration with mannitol, which did not affect the progress of the radiotherapy. Radiation necrosis occurred during follow-up. CONCLUSION: Compared with the standard stupp regimen, using 53Gy/15f in the high-risk area and 43Gy/15f in the low-risk area as an adjuvant therapy with concurrent temozolomide and sequential temozolomide, there was no increased risk of disease recurrence, no increased risk of death, and no increased risk of death.

**CLRM-07**

**A MULTIVARIATE RETROSPECTIVE ANALYSIS OF 159 PATIENTS WITH HIGH-GRADE GLIOMAS: OVERALL SURVIVAL, PROGRESSION-FREE SURVIVAL, AND PROGNOSTIC FACTORS**

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BACKGROUND AND PURPOSE: High-grade gliomas are highly malignant, aggressive, high incidence rate, and mortality. The purpose of this study was to analyze retrospectively and identify prognostic factors of recurrence of patients with high-grade gliomas diagnosed by biopsy or postoperative pathological examination. METHODS: In this retrospective study, we analyzed the patient's demographic data, tumor characteristics, treatment approaches, immunohistochemistry results, the overall survival (OS) time, and the progression-free survival (PFS) time in a series of 159 histologically proven high-grade gliomas recruited from January 2011 to December 2019. OS time and PFS time were analyzed by Kaplan-Meier survival analysis with log-rank test and found the independent factors by using Cox regression analysis. RESULTS: Survival analysis showed that an OS of 84.90%, 55.35% and 13.20% was observed at 1, 2 and 5 years, respectively. And a PFS of 56.6%, 25.26% and 3.14% was observed at 1, 2 and 5 years, respectivly. Multivariate analysis showed that postoperative IDH1R132H expression by immunohistochemistry were statistically significantly associated with PFS (P < 0.01; P = 0.004; P = 0.003; P = 0.016; P = 0.003; and P = 0.021, respectively). Similarly, we concluded that different grades, age, pathological classification, IDH1R132H expression by immunohistochemistry were statistically significantly associated with PFS (P < 0.01; P = 0.004; P = 0.003; P = 0.001; and P = 0.028). CONCLUSIONS: Tumor grade and concurrent chemoradiotherapy after surgery were independent prognostic factors affecting patients' survival, and grade was also an independent factor affecting PFS.

**CLRM-08**

**TARGETING IMMUNE-PAYLOAD TO THE GlioBLASToma TUMOR MICROENVIRONMENT USING A MACROPHage-BASED TREATMENT RELYING ON AUTOLOGOUS, GENETically MODIFIED, HEATOMATOGENOUS CARCINOMA CELL-BASED THERAPY: THE TEM-GBM STUDY (NCT03866109)**

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We developed an autologous hematopoietic stem cell-based platform designed to deliver IFNs, by a transcriptional and post-transcriptional control mechanism mediated by miRNA target sequences, specifically into the tumor microenvironment (TME) via the transducible system Temferon. As of Feb 2022, 3 escalating doses of Temferon (0.5-2.0x10^6/kg) were tested across 15 newly diagnosed, unmethylated MGMT GBM patients assigned to 5 cohorts. Follow-up from surgery is 6-28mo (2-25mo after Temferon). To date, none of the DUs have been measured. As expected, 1mo after the administration of the highest tested dose, the hematopoietic system of Temferon-treated patients was comprised of up to 30% of CD14+ modified cells. Temferon-derived progeny persisted, albeit at lower levels, up to 18mo (longest time of observation). Despite the substantial proportion of engineered cells, low concentrations of IFNs were detected in the plasma and in the CSF, indicating tight regulation of transgene expression. SAEs were mostly attributed to conditioning chemotherapy (infections) or disease progression (seizures). 1SUSAR (persistent GGT elevation) occurred. Median OS is 15mo from surgery. Homing of transduced cells to the tumor was demonstrated by the presence of gene-marked cells in the 2nd surgery specimens of 3 out 4 pts belonging to low dose cohorts. Single-cell RNA seq of the TME highlighted a Temferon signature associated with the induction IFN-alpha/ beta mechanism mediated by miRNA target sequences, specifically into the tumor microenvironment. In the TEM-GBM Study, the TME of GBM patients were transduced with Temferon, with concurrent temozolomide and sequential temozolomide, there was no radiation necrosis occurred during follow-up. No radiation necrosis occurred during follow-up. CONCLUSION: At present, 58 patients survived and 2 died, 2 in the conventional fractionation group and 30 in the hypofractionated treatment group. Radiation cerebral edema occurred in 9 cases, 6 cases in the hypofractionated group and 3 cases in the conventional fractionation group, all of which were completely relieved after dehydration with mannitol, which did not affect the progress of the radiotherapy. Radiation necrosis occurred during follow-up. CONCLUSION: Compared with the standard stupp regimen, using 53Gy/15f in the high-risk area and 43Gy/15f in the low-risk area as an adjuvant therapy with concurrent temozolomide and sequential temozolomide, there was no increased risk of disease recurrence, no increased risk of death, and no increased risk of death.

**CLRM-09**

**FIRST-LINE TUMOR TREATING FIELDS (200 KHz) THERAPY FOR NEWLY-DIAGNOSED GliobLASToma: THE PHASE 3 TRIDENT TRIAL (EF-32)**

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BACKGROUND: Tumor Treating therapy (TTFields; 200 kHz) comprise alternating electric fields that disrupt cancer cell division, and is approved for newly diagnosed glioblastoma (nGMBM), recurrent GBM and mesothelioma. In the phase 3 EF-14 trial, TTFields/temozolomide...